Reciprocal Teaching with Technology

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An Honors Thesis (HONRS 499)

By

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&
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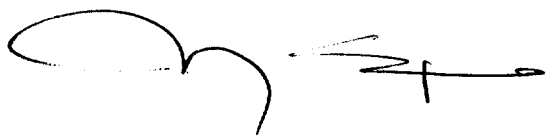
Dr. Matthew Stuve



Ball State University
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Abstract:

Eve and Alyssa explore how technology is integrated into the classroom. Their portfolio contains a research paper about the benefits and barriers of incorporating technology into the classroom, as well as a teacher resource page.

Acknowledgments:

Thanks to Dr. Matthew Stuve for their help, guidance, and patience as we undertook this constantly changing project. Thanks especially to Dr. Stuve for his endless ideas and knowledge. We could not have done it without his support and encouragement. .

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Introduction

Reflective Analysis of Portfolio Artifact

INTASC Principle :

INTASC #7 Plans and Integrates

Brief Description of Evidence:

This is an introduction to our portfolio. It includes a summary of the project as well as an explanation of our roles.

Analysis of What we learned:

Our project deviated from our original plan. We were able to be flexible enough to make adjustments to meet the needs of the students as well as the needs of the project. We responded to unanticipated events such as schedule extensions and scheduling conflicts. We learned that although anticipated outcomes are not always achievable, with adjustments and adaptations the project can be modified to accomplish its goals.
We learned that as you are planning it is important to respond to unanticipated events and to continuously evaluate our project in terms of the goals that we set.

Reciprocal Teaching Project Summary

The reciprocal Teaching project portfolio allowed us to enhance our professionalism in the education field, while at the same time gaining experience at integrating technology in the classroom.

This project targeted education majors and teachers currently in the field. Through our project we :

- Enhanced our professionalism in education by working with technologically experienced professors and colleagues.
- Gained experience integrating technology in the classroom.
- Improved our technological knowledge.
- Gained knowledge of administrative roles when integrating technology.
- Provided support for EDTEC 320 students and Burris teachers.

Our project has two parts, one as support staff for reciprocal teaching and the second part as reflective practioners.

As support staff we did behind the scenes work to ensure that human compliance was met and shot plans were ready. We actively helped Dr. Stuve revamp assignments and gave him feedback about how the class and projects were progressing.

As reflective practioners we developed a thematic unit and teacher resource web page. We attended weekly and bi-weekly meetings to reflect on our experiences both in the classroom and with our behind the scenes work. Finally we researched to find the answer to the question, "What are the benefits and challenges of implementing technology into the classroom?"

Through this project we feel that we have gained a better understanding of integrating technology into the classroom. We learned to be more professional while communicating with students and teachers. We acquired more knowledge as we gathered research for our paper.

Eve's Role in the Project

Throughout this project, I assumed four different roles: director of videography, teacher, researcher, and evaluator. As the project progressed, these roles were adjusted and redefined to meet the needs of the project. Each role influenced the project in a unique way and provided knowledge about technology integration in the classroom.

As the director of videography, I developed a web page that communicated to the EDTEC students how to create and plan their digital video case study. I provided information about storyboards, shot plans, and resources that could assist the students in their projects. I also developed a shot plan form that allowed EDTEC students to submit their shot plan ideas online. After the students completed the forms, they were sent via email to Dr. Stuve and me. After reviewing the shot plans, I would email the group suggestions and comments about their project. The shot plan form permitted the EDTEC students to communicate their ideas and receive feedback easily and effectively. Originally, this role also contained an on-site aspect, too, but this was eliminated because of scheduling delays and conflicts.

In my role as a teacher, I helped develop a teacher resource web page for pre-service and in-service teachers that provided information about implementing technology in the elementary classroom. The web page consisted of three parts. The first part discussed the classroom environment and the roles of the teachers and students in a technology-rich classroom. The second part provided teaching tips and suggestions. The last part was a thematic unit about rainforests that integrated technology. The web page gave me the opportunity to share with other teachers some of the knowledge I had gained.

I also took on the role of a researcher. In this role, I explored the benefits of using technology integration in teaching and learning. I examined several books, magazines, and web pages to seek out the numerous benefits associated with the implementation of technology. I also learned about the benefits through classroom observation.

My final role was as an evaluator. This role took on a variety of responsibilities. One of the responsibilities was to meet with Dr. Stuve on a weekly basis to reflect and evaluate the reciprocal teaching apprenticeship. Another responsibility was to evaluate the EDTEC 320 students' final digital video case studies. Finally, I took on the role when I assessed my own learning as we constructed this portfolio.

Each of these roles was significant to the success of the project. They helped teach me how to successfully integrate technology into learning and instruction. Participating in this project has helped me feel more equipped to implement technology into my own classroom.

Alyssa's Role in the Project

At the beginning of the project I had a defined role. My primary role in the project was to be in charge of the human compliance. This means that I would handle writing and distributing permission slips, organize all paperwork, and be sure that students who did not have permission to be in the digital video were not in the video. My secondary role was to assist Eve with videography and to help students as they were taping their digital video projects. In addition to these roles, I was also supposed to write a paper about the difficulties of integrating technology into the classroom.

Since this was the first time the class was designed this way the schedule was often extended or rushed to meet the needs of the teachers and the students. As the reciprocal apprenticeship project changed, so did my role in the project. I created the human subjects permission slips, but did not receive many of the students human subjects plans. This was mainly due to the fact that projects were rushed so they could be completed and that many of the EDTEC students had no students who were not able to participate. I did not have to deal with the paperwork because the Burris teachers kept all necessary paperwork. This made my part of the job much easier. As for my secondary role of assisting Eve with the videography, that was also altered. Since the EDTEC students had to tape at very specified time with little notice, I was not able to attend the taping sessions. Instead, we reflected on the projects via the Internet. This gave me a chance to still see what the students were doing even though I could not be there to see the actual taping.

Another change in the project was the teachers web resource. We decided to create web-based resource with technology tips and a thematic unit. My part of this unit was to create a Math and Science lesson as well as making a page about technology teaching tips.

My final role in the project was to research the question, what are the barriers to technology implementation? I used book, web, and magazine articles to find the difficulties and solutions to how these difficulties could be overcome.

Though our project changed as the semester progressed, I feel that I have learned a great deal about using technology in the classroom. I feel that I am better prepared to meet the challenges associated with technology integration in my future classroom.

Software

Reflective Analysis of Portfolio Artifact

- **INTASC Principle :**

  INTASC #1 Understands Content

- **Brief Description of Evidence:**

  A short summary of all the software used throughout the duration of the project.

- **Analysis of What we learned**:

  By using this software we were able to update our knowledge about the latest software available to meet the goals of our project. Learning this software enabled us to not only complete our portions of the project, but also to assist students if they had questions. We now have a base knowledge of software that we will be able to incorporate in our own classrooms in the near future.

Claris Homepage 3.0

Claris Homepage is a software tool that assists in developing web pages without having to learn html code. Claris Homepage has several features that make it powerful and extremely easy to use. These features include, but are not limited to, an *object editor* that shows the attributes of the object selected, a *preview feature* that allows you to view exactly what your pages look like on the Internet, and a *form feature* that enables a form to be created.

We learned this software to help create web pages that met the needs of our project. It was essential for us to acquire knowledge about this software to develop the videography web page with the shot plan form and our teacher resource page. This software made the tasks of creating these web pages more manageable.

iMovie

iMovie is software that can transform digital video footage into a movie. Amateur video can be edited and combined with other video with the click of a mouse. These movies can include effects, voice-overs, music scores, transitions, titles, and credits. The iMovies can be published to the web, or saved as videotapes.

We learned to use this software to support the EDTEC 320 students as they created case studies about their Burris experiences. These case studies were published to the web so that other students could reflect upon each case.

Teacher Resource Page

Reflective Analysis of Portfolio Artifact

- **INTASC Principle :**

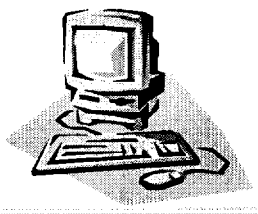
  INTASC #10 Participates in Professional Community

- **Brief Description of Evidence:**

  Teacher resource webpage with thematic unit, tips for teachers, and teaching environments.

- **Analysis of What we learned**:

  This webpage allows us to share knowledge gained through this experience with pre-service and in-service teachers. We took an active role in creating a resource that clearly communicates classroom suggestions for the entire teaching community. This web resource acts as a guide for teachers trying to integrate technology into their own classroom. This resource will enable teachers to support their students learning and well-being.



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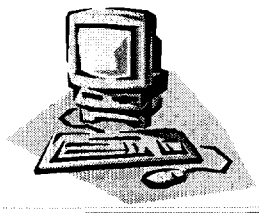
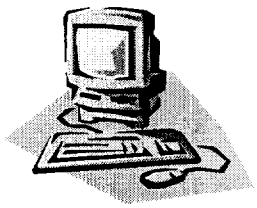
Implementing Technology in the Elementary Classroom

ITDPT 400 Final Project



Home
Classroom Layout
Classroom Integration

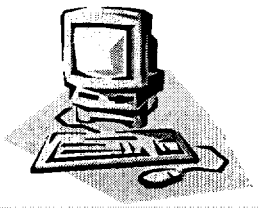
Classroom Environment



- One Computer
- Multiple Computer
- Classroom Environment

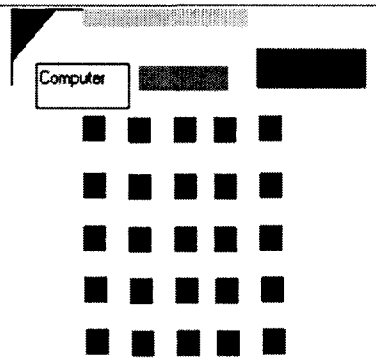
Classroom Layout

One Computer Classroom



You are ready to implement technology in your classroom, but you are just not sure where to put your computer. Before you begin to rearrange your room, it is important to ask yourself this question- "What will I primarily use the computer for?" The answer to this question will determine where you should place your classroom computer to fit your needs.

The Presenter Layout



Description:
Computer is placed in the front of the computer near the front of the classroom, so that connections can easily be made to the projector or television. It should have easy accessibility for the teacher and students.

Uses:
Whole class or large group instruction for presentations and cooperative learning.

Advantages:
+ Easily accessibility
+ Unobstructed sight lines to presenter
+ Good for whole group instruction

Disadvantages:
- Small groups may disrupt class
- Connection cords to TV and projector may cause obstacles
- Cannot be moved easily

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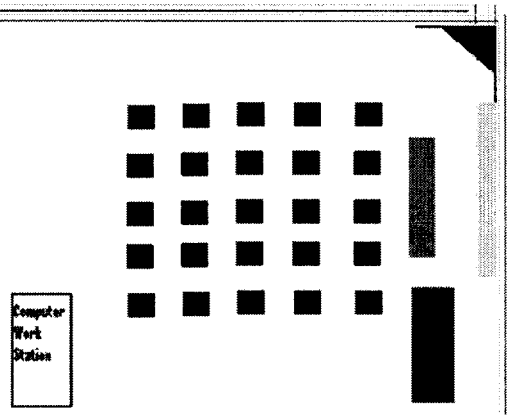
The Work Station Layout



Description:
Computer is placed in the back of the classroom or aligned on the side wall of the classroom to help eliminate distraction.

Uses:
Small group or independent work, long-term group projects

Advantages:
+ Does not create a distraction in classroom
+ Gives individuals or groups an area to work

Disadvantages:
- May be difficult to monitor student work
- May be difficult to connection to TV or projector for whole group instruction

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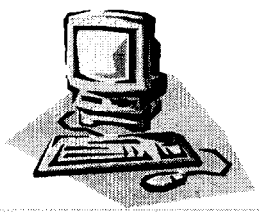
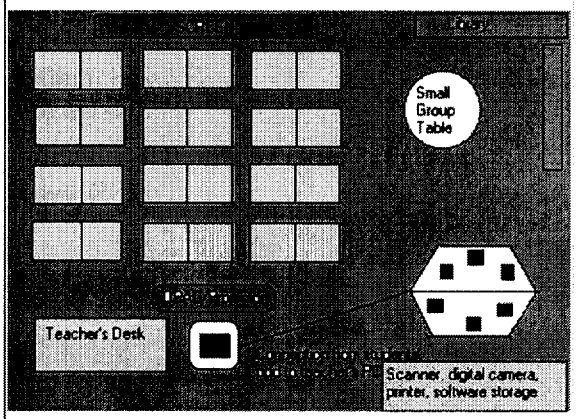
Multiple Computer Classroom



You are ready to implement technology in your classroom, but you are just not sure where to put your computers. Before you begin to rearrange your room, it is important to ask yourself this question- "What will I primarily use the computers for?" The answer to this question will determine where you should place your classroom computer to fit your needs.

The Pod Layout



Description:
Computers are aligned in a cluster or island.

Uses:
Classroom or area where students can interact frequently with computers either individually or in a group.

Advantages:
+ Promotes small group interaction
+ Promotes interaction with teacher and students
+ Effective Use of space in classroom
+ Teachers can monitor computers easily
+ Systems and cables are well organized
+ Promotes frequent use

Disadvantages:
- Networking is difficult
- Teacher assumes more support role with more computers
- Not every student has a computer
- Difficult to monitor whole class

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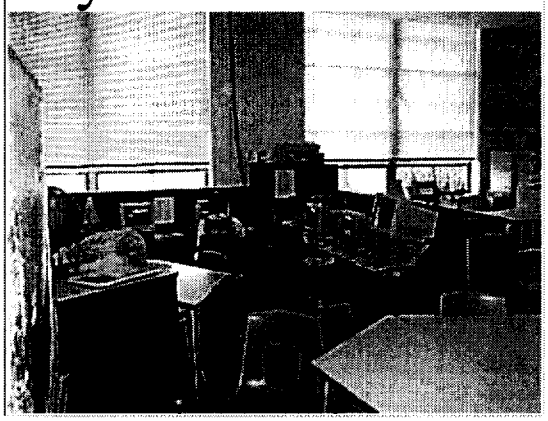
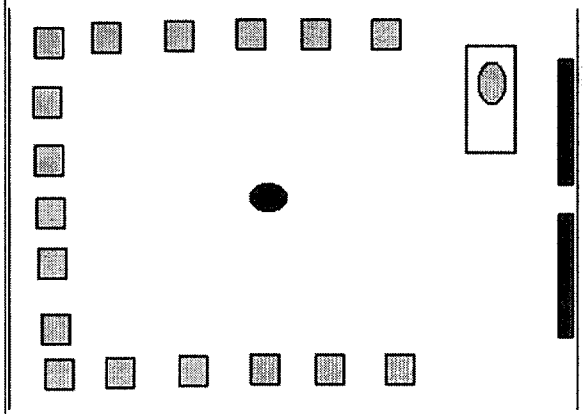
The Perimeter Layout





Description:
Computers are aligned in a U-shaped fashion around the classroom or aligned against the walls of the classroom.

Uses:
Whole group or larger group instruction

Advantages:
+ Network and power access easily accessible
+ Computers are out of the way
+ Every student has a computer
+ Easy view of students' work

Disadvantages:
- Does not promote group work
- Students can be distracted during instruction
- Ineffective use of space

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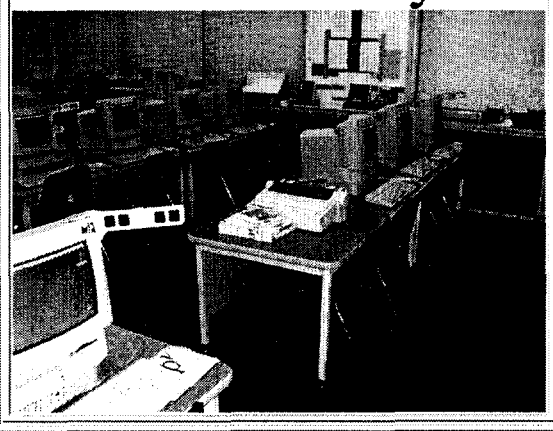
The Lecture Layout



Description:
Computers are aligned in rows.

Uses:
Whole class instruction or general purpose labs

Advantages:
+ Best for didactic instruction or training on or about the computers
+ Every student has a computer
+ Promotes whole group instruction
+ Promotes frequent use

Disadvantages:
- Difficult for teacher to monitor student activity
- Ineffective use of space
- Very little work space for students

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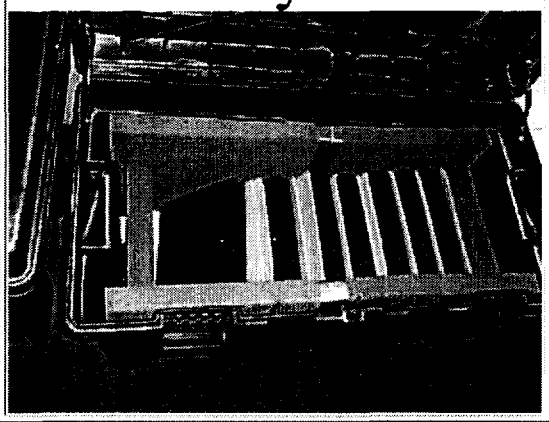
Portable System



Description:
Laptops, palmtops, or keyboarding computers, perhaps with docking stations of some kind

Uses:
Whole class or group instruction

Advantages:
+ Every student has a computer
+ Effective use of space
+ Brings computing to a child's scale and location

Disadvantages:
- Creates new classroom dynamics
- Supporting infrastructure may be quite elaborate
- May support theft

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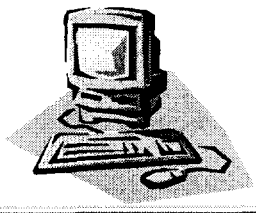

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Teaching Tips

Tips

- Don't just use technology for technology's sake. Make sure that using technology enhances the lesson by teaching an educationally sound lesson.
- Start by integrating technology into what you are already doing. Ex. How can the Internet spice up a lesson I've already done?
- Use the Internet as a regular learning station.
- Use parent volunteers to help moniter students online time.
- Don't bite off more than you can chew! Implement a little at a time. Start with one lesson and gradually build up .
- Use good web resouces.

What makes a good web resource?

Site is well organized and has an easy navigation scheme

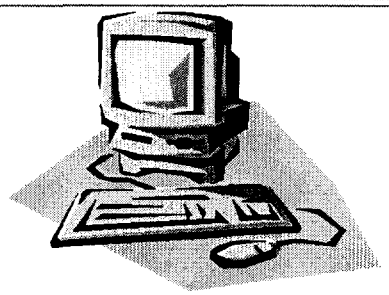
Site is updated often

Source is credible

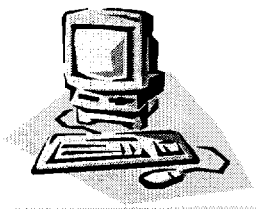
Information is useful, educational, and motivational

No sexuality, adult content, bad language, or hate speech

Minimal ads, graphic and music



Back to Teaching Tips



Classroom Environment

Classroom Integration

Roles of Teacher

Types of Integration

Roles of Teacher

The following table illustrates the roles that teachers may have to play when they integrate technology into their classroom. After examining the lesson you wish to integrate with technology, choice which roles you must fulfill to make the lesson successful.

Role	Description of Task
Coordinator	As coordinator, the teacher schedules computer time for each student or group. The teacher also needs to request the equipment needed for the integration.
Seeker	As seeker, the teacher needs to locate the equipment and other supplies and make sure all of the equipment is working properly before the lesson. (If your school has a technology coordinator, this role would be eliminated.)
Evaluator	As evaluator, the teacher must assess students' use of the technology and provide feedback. The teacher must also reflect and evaluate the technology used in the lesson. He or she must make adjustments to make sure the technology enhances learning and is meaningful.
Guide	As guide, the teacher has a vision or a plan for the outcome of the technological integration. It is his or her responsibility to provide direction for the class to make sure the objectives and goals for the lesson are meet and the technology is integrated and used appropriately.
Facilitator	As facilitator, the teacher should facilitate discussions as well as the learning experience. The teacher should be responsible

	for the information that is covered in the activity.
Mediator	As mediator, the teacher helps the students work cooperatively during the technology integration. He or she helps the students move through the tough spots and troubleshoot the technological problems.
Provider	As provider, the teacher offers the help and teaches the technological skills and strategies that are needed to accomplish the goals and objectives of the lesson.

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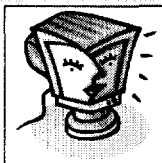
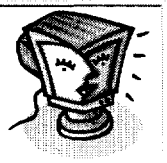


Types of Integration



The following table* illustrates the different types of integration that can occur in your classroom. To choose the type of integration most appropriate for your lesson, consider how you want your students to use the technology in your lesson.

Type	Description
Constructive	Students integrate new ideas into their prior knowledge to make sense or meaning. They use technology as cognitive tools or to produce student media.
Conversational	Students benefit from being part of knowledge-building communities in which learners exchange ideas and build on each other's knowledge.
Contextualized	Students encounter learning assignments that are situated in real-world tasks or simulated through problem-based activities. Simulation software can reconstruct scenarios for students analysis.
	Students work in learning communities in which each

Collaborative	member contributes to the group's goals, and they work to maximize each other's learning. Using computers for conferencing or using software that supports cooperative work can facilitate collaboration.
Active	Students participate in mindful processing of information. They are responsible for the results and may use the computer as either a cognitive or productivity tool to achieve those results.
Reflective	Students reflect on the process completed and the decisions made during the learning activities and articulate what they have learned. As a result, students may use computers as cognitive tools to demonstrate what they know.
Intentional	Students are trying to achieve cognitive goals and objectives. Computers allow students to develop activity organizers and use software that supports the goals and objectives they are trying to accomplish.

*This table has been adapted from an article in *Learning and Leading with Technology* entitled "Integrating Technology" by Laurie B. Dias.

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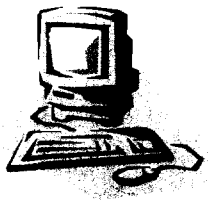
- Home
- Introduction
- Math
- Social Studies
- Language Arts
- Science

Thematic Unit

Introduction to Rain Forests

The rain forest is a very important part of our lives. We get many products like cocoa for chocolate, vanillia, and nuts-Just to name a few! Read to find out more about the rain forests! Rain forests are being destroyed at an alarming rate. Take a few minutes to learn about the rain forest by looking at this slideshow.

Back to Thematic Unit



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Math Lesson

Objectives	1. The students will grow a simulated rain forest for two weeks. 2. The students will observe the growth of the mini forest every two days and measure the growth in centimeters.

	3. The students will record observations in an excel spreadsheet. 4. The students will create a graph using excel
Standards	***Standard 6-Data Analysis and Probability*** Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings. They show outcomes for simple probability situations. 4.6.2 Interpret data graphs to answer questions about a situation ***Standard 5-Measurement*** Students understand perimeter and area, as well as measuring volume, capacity, time, and money. 4.5.1 Measure length to the nearest quarter-inch, eighth-inch, and millimeter.
Materials	EACH GROUP WILL NEED: • 1/4 cup Grass Seed • One gallon size baggie • 3 paper towels • 1/2 cup water • warm, dark closets • marker • Computer with EXCEL (or another spreadsheet application)
Procedure	Students will review what they have already learned about the bottom layer of the Rain Forest: the forest floor. (Students should also have prerequisite knowledge about what plants need to grow). Students will form groups of 2. As a group, students will hypothesize if grass seeds will be able to grow in the dark. Why will they be able to grow? Why not? Students will be given one baggy per group. Each group will use a marker to write their names on the bag. Students will get the three paper towels and wet them with the water. Students will sprinkle 1/4 cup grass seed between the paper towels. Lay the paper towels horizontally in the baggy, blow air into it, and seal it. Place in a dark closet for two days. Students will check their seeds every two days. As they check their seeds they will measure the growth of the seeds and record the growth in centimeters using a spreadsheet. The spreadsheet will be labeled down the left side: Day 1, day 2, day 3 etc. On the right side the measurement in centimeters will be recorded. Students will record observations every two days for two weeks. At the end of two weeks the students will graph the growth of the seeds. Students will then compare the graphs to one another. Students will creat a display with their graphs, data, and seeds. The conclusion: Discuss- Did the seeds grow in the dark? What allowed them to do this? Why is this knowledge important to plants growing in the Forest floor?
Evaluation	Students will be evaluated using the following rubric:

Participation	5 pts.	3 pts.	1 pt.	0 pts Did not

		Participated in all group activities	Participated in most group activities	Participated in few group activities	participate	
	Graph	3 pts Graph is complete with a number for each day	2pts Graph is missing 1-2 numbers	1 pts Graph is missing 3-4 numbers	0 pts Graph is missing 5 or more numbers.	
	Measurement	3 pts Measured to nearest millimeter with realistic answers	2pts Measured with 1 or more outlandish number	1pt Measured with 2 or more outlandish numbers	0 pts No measurements make sense.	
						Total _ /11

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- Home
- Math
- Social Studies
- Language Arts
- Science

Social Studies Lesson

Using the Internet to Compare and Contrast Indiana and Tropical Rainforest

by Eve Ensley

Standards:
National Educational Technology Standard #2:
Social, Ethical, and Human Issues

1. Students understand the ethical, cultural, and societal issues related to technology.
2. Students practice responsible use of technology systems, information, and software.
3. Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

National Educational Technology Standard #3
Technology Productivity Tools
1. Students use technology tools to enhance learning, increase productivity, and promote creativity.
2. Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

National Educational Technology Standard #5:
Technology Research Tools
1. Students use technology to locate, evaluate, and collect information from a variety of sources.
2. Students use technology tools to process data and report results.
3. Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

Indiana Social Studies Academic Standard #3
Students will identify the components of Earth's physical systems; describe the major physical and cultural characteristics of Indiana; give examples of how the interaction of people with their environment has changed over time and continues to change; and identify regions of Indiana.

Indiana Social Studies Academic Standard #5
Students will examine the interaction between individual and group behavior in community life; analyze the roles and relationships of diverse groups of people contributing to Indiana's cultural heritage; and describe the impacts of science, technology, and the arts on Indiana's culture.

Objectives:
Students will be able to:

- Use the Internet as a research tool.
- Compare and contrast life in Indiana with life in the Tropical Rainforest.
- Create a multimedia presentation with research.

Materials:

- HyperstudioSoftware
- Inspiration Software
- Internet Access
- Websites and Search Engines that are kid approved
- Yahooligans

- RAN
- PBS

Procedure:
1. Students should have a background knowledge of Tropical Rainforest before they begin this lesson.
2. Introduce the project to them. Tell them that they are going to use the Internet to compare and contrast life in Indiana with life in the tropical rainforests. (life= climate, people, food, resources, etc.)
3. Because the students are using the Internet to research for this project, it is important that students learn strategies and skills that will help them be efficient and effective Internet researchers. Spend some time discussing how to research on the Internet. (i.e. How to tell if a website is factual? How to search efficiently? How to cite Internet resources? etc.)
4. Provide a list of search engines and websites (some are listed above), so that students have examples of good websites and have a starting point to begin their research.
5. Before the students begin their research, provide them with a checklist or rubric so they know their expectations for the project. (For example, project presents appropriate information on Indiana and Tropical Rainforests, pictures are used in presentation, websites are cited correctly, etc.)
6. Split students up into heterogeneous groups of 3-4 students.
7. Give groups adequate time to research. (Most successful in lab setting, but could be done at one computer if a schedule is prepared.
8. After students have researched the information, have the students plan their presentation.
9. Allow students enough time to put information into Hyperstudio and Inspiration presentation. Have students make webs or concepts maps in Inspiration. Add creation to a Hyperstudio presentation with the rest of the research. (See Ruffini resource for more guidance and structure.)
10. Minilessons, teacher tutoring, and peer tutoring can be used to teach Inspiration and Hyperstudio.
10. Have students share final presentations with the class.

Evaluation:
Were students able to :

- Use the Internet as a research tool?
- Compare and contrast life in Indiana with life in the Tropical Rainforest?
- Create a multimedia presentation with research?

Resources:
Ruffini, Michael, F., *Learning and Leading with Technology.* "Do It Step-by-
Step: A Systematic Approach to Designing Multimedia Projects." February
2000, pp. 6-13.

Canfiled Felt, Elizabeth and Symans, Sarah C., *Learning and Leading with Technology.* "Teaching Students to Use the Internet as a Research Tool."
March 2000, pp. 13-17, 21.

- Home
- Math
- Social Studies
- Language Arts
- Science

Language Arts Lesson

Creating Electronic Books about Tropical Rainforests

by Eve Ensley

Standards:
National Educational Technology Standard #2:

· Social, ethical, and human issues
1. Students understand the ethical, cultural, and societal issues related to technology.
2. Students practice responsible use of technology systems, information, and software.
3. Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

National Educational Technology Standard #5:
· Technology research tools
1. Students use technology to locate, evaluate, and collect information from a variety of sources.
2. Students use technology tools to process data and report results.
3. Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

Indiana Language Arts Academic Standard #4:
· Students write clear sentences and paragraphs that develop a central idea. Students progress through the stages of the writing process, including prewriting, drafting, revising, and editing multiple drafts.

Indiana Language Arts Academic Standard #5:
· Students are introduced to writing informational reports and written responses to literature. Students continue to write compositions that describe and explain familiar objects, events, and experiences. Student writing demonstrates a command of Standard English and the drafting, research, and organizational strategies. Writing demonstrates an awareness of the audience and purpose of writing.

Objectives:
Students will be able to:
· Brainstorm a list of ideas from their research of Rainforest Internet Sites.
· Demonstrate an understanding of the writing process by submitting artifacts for each step.
· Create an electronic book using PowerPoint (or other presentation software).
· Share their finished story with the class.

Materials:
· Computer Access- one, pod, or lab
· PowerPoint or other presentation software
· Internet Access
o Sounds of the Rainforest
o Video clips of the Rainforest
o RAN
o PBS
· Road map Worksheet
· Disk for saving
· Books, magazines, and other research materials

Procedure:
1. To focus and motivate the students, introduce the concept of electronic books. Tell them that electronic books are stories that are created using PowerPoint or other presentation software. To motivate them, show them an example of an electronic book, if it is available.
2. Tell the students that their books will be a creative writing assignment. Their writing should be inspired by the theme of Tropical Rainforests.
3. Provide some time for the students to research the Rainforest. Provide books, magazines, websites, CD's, etc. for the students to look at and examine. Encourage them to jot down notes that describe the Rainforest through their five senses. Tell them that this research will help them write their stories.
4. Next, have the students plan their story by completing the Roadmap Worksheet. This worksheet will force them to think about different aspects of their story. Inform the students that this worksheet is just a plan for the story and it can be changed once the story is under construction.
5. After each student receives approval and advice from the teacher about their Road map Worksheet, they can begin creating the story using a computer and the presentation software. Provide each student with a disk, so that they can save their work each day.
6. During this time, the teacher can teach writing and computing skills. This can be achieved through minilessons, teacher tutoring, and peer tutoring. Some computing skills that a teacher might address are modifying text, inserting clipart and photos, scanning pictures and photos, and creating and adding sound. (It is important that a checklist is developed that communicates which skills need to be shown in the students' electronic books.)
7. After the students have completed their stories, they need to revise and edit them. This can be accomplished in a variety of ways: peer editing, self-editing, or writing conferences.
8. Finally, the students can share their stories with the rest of the students. Sharing can also occur with students in other classes which will give the students an opportunity to teach literacy and computer skills at the same time.

Evaluation:
Were students able to:
· Brainstorm a list of ideas from their research of Rainforest Internet Sites?
· Demonstrate an understanding of the writing process by submitting artifacts for each step?
· Create an electronic book using PowerPoint (or other presentation software)?
· Share their finished story with the class?

Resources:
Canfiled Felt, Elizabeth and Symans, Sarah C., Learning and Leading with Technology.
"Teaching Students to Use the Internet as a Research Tool." March 2000, pp. 13-
17, 21.

Hodges, Bob. Learning and Leading with Technology. "Electronic Books: Presentation
Software Makes Writing More Fun." September 1999, pp18-21.

Roadmap Worksheet

A Guide for Planning your Tropical Rainforest Story

Name: _____

The title of my story is: _____

The main characters are: _____

In general, my story is about: _____

_____

A problem that gets solved or a conflict that is resolved: _____

_____

My first slide will include: _____

_____

Things that happen in the beginning: _____

_____

Things that happen in the middle: _____

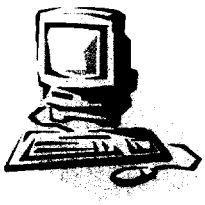
_____

Things that happen at the end: _____

_____

My last slide will include: _____

_____



- Home
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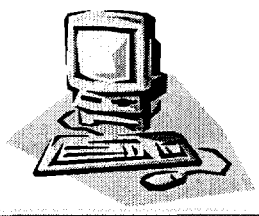
Science Lesson

Objectives	• The student will complete a short web quest on the rain forest. • The students will create a drawing of a layer of the rain forest.

Standards	***Standard 4-The Living Environment*** Students learn about an increasing variety of organisms ? familiar, exotic, fossil, and microscopic. They use appropriate tools in identifying similarities and differences among them. They explore how organisms satisfy their needs in their environments. Interdependence of Life and Evolution 4.4.3 Observe and describe that organisms interact with one another in various ways, such as providing food, pollination, and seed dispersal. 4.4.4 Observe and describe that some source of energy is needed for all organisms to stay alive and grow. 4.4.6Explain how in all environments, organisms are growing, dying, and decaying, and new organisms are being produced by the old ones.
Materials	• Computer with Power Point accessibility • scavenger hunt • Large sheet of butcher paper • Art Supplies (markers, crayons, pencils etc)
Procedures	Students will get into groups of four. Each member of the group will chose one layer of the rain forest to explore. EACH child will answer the following questions about his/her layer as they complete the scavenger hunt. Click here for the printable version. The rain forest has four different layers. By searching the web you and your partners will learn a little more about layers of the rainforest! Pick one layer of the rain forest. Which layer did pick? Now you are going to go on a scavenger hunt to find information about your layer. What do you like about that layer? Where is the layer located? Find three plants that grow there. Finda 3 animals that live there. How do these organisms interact with one another? (i.e. the animals eat the plants)

	The group memebers will work together to create a poster of the four layers from the information they have gathered. The poster must have the layers in the correct order as well as 3 plants and animals from each layer.
Evaluation	<table><tr><td>Animals</td><td>Plants</td><td>Neatness</td><td>Layers in correct order (Emergent, canopy, understory, forest floor)</td><td>Turned in on time.</td><td rowspan="3">Total /15</td></tr><tr><td>3 pts. Three animals drawn in the poster</td><td>3 pts Three plants drawn in the poster</td><td>3 pts The poster is neat with colors in the lines, no stray marks, paper is not wrinkled</td><td>3 pts. Layers are in the correct order</td><td>3 pts Project is turned in on time.</td></tr><tr><td>0-2 pts less than three animal drawn</td><td>0-2 pts less than three plants</td><td>0-2 pts stray marks or wrinkled paper</td><td>0-2 pt. Layers are not in correct order</td><td>0-2 pts. Project not turned in on time</td></tr></table>



Home

Resources

The list below contains the resources used for this project.
They may be beneficial to you and your classroom.

BOOKS AND MAGAZINES:

Dias, Laura, B., *Learning and Leading with Technology.* "Integrating Technology. November 1999, pp.10-13, 21.

Canfiled Felt, Elizabeth and Symans, Sarah C., *Learning and Leading with Technology.* "Teaching Students to Use the Internet as a Research Tool."
March 2000, pp. 13-17, 21.

Haymore Sandholtz, Judith, Ringstaff, Cathy, and Dwyer, David C., *Teaching with*
Technology: Creating Student Centered Classrooms. Teachers College Press: New York, 1997.

Hodges, Bob, *Learning and Leading with Technology.* "Electronic Books: Presentation Software Makes Writing More Fun." September 1999, pp18-21.

King, Tom, *Technology in the Classroom: A Collection of Articles.* Skylight Training and Publishing, Inc.: Arlington Heights, IL, 1997.

Ruffini, Michael, F., *Learning and Leading with Technology.* "Do It Step-by-Step: A Systematic Approach to Designing Multimedia Projects." February 2000, pp. 6-13.

Shepherd Hayes, Deborah, *Managing Technology in the Classroom.* Teacher Created Materials, Inc.: Huntington Beach, CA, 1997.

WEBSITES:

http://www.earthsbirthday.org/rainforest/rvt/key/emergent.html

http://www.stemnet.nf.ca/CITE/rainforest_layers.htm

http://www.earthsbirthday.org/rainforest/rvt/key/under.html

http://rainforest-australia.com/canopy.htm

http://rainforest-australia.com/forest.htm

http://www.abcteach.com/RainforestFacts/layers.htm

http://tqjunior.thinkquest.org/5393/layers_rf.html

http://www.pbs.org/tal/costa_rica/layers.html

http://www.sci.mus.mn.us/sln/tf/s/strata/strata.html

http://www.ran.org/kids_action/

http://www.pbs.org/journeyintoamazonia/enter.html

http://www.christiananswers.net/kids/vidclips.html

http://www.christiananswers.net/kids/sounds.html

Videography

Reflective Analysis of Portfolio Artifact

- **INTASC Principle :**

INTASC #4 Designs Instructional Strategies

- **Brief Description of Evidence:**

Videography webpage, shot plans, and correspondence regarding planning and filming digital video projects.

- **Analysis of What we learned:**

The videography webpage gave us the opportunity to clearly communicate with students using a variety of strategies. Students used web forms to submit shot plans that they created. We also used email to communicate about assessment of the shot plans and provide suggestions. We learned to use a variety of technological correspondence to meet the needs of the students and the teachers.

Videography Assignment: Planning for Your Mini Case Study

Please complete the follow steps to help plan the videography aspect of your mini case study.

1. First, your group needs to have worked with the teacher to complete the lesson plan (or simply a project description) and your NETS Targets in the Learning Interchange.

2. Next, you need to begin to plan your videography. Print out and complete a storyboard. Here are some helpful resources for doing storyboards:

- What is a Storyboard?
- How Do You Use a Storyboard?

3. After completing the storyboard, complete the **videography shot plan (assignment worth 15 points)** for each shot (scene). Each box on your storyboard needs a separate shot plan submitted. These resources may help you design your shot plans:

- ALI: Tips for Making Your Movie
- Apple: Shoot like a Pro
- Digital Video and Stop Action Animation Resource Website

4. Eve and/or Alyssa may come to your first shoot to help out. But you need get ready and organized yourselves. Identify your software needs for the activity and communicate them to Dr. Stuve, Alyssa, or Eve.

5. The camera equipment is in the far upright filing cabinet, fourth drawer in the iMac Lab. If the cabinet is locked, get a key from one of the teachers (Mrs. Murray is your best bet. Plan on charging the camera battery before the shot. Get a DV tape from Dr. Stuve or Eve or Alyssa in advance of your project.

6. Make sure you use your storyboard and shot plans during this process. Remember, the storyboard and shot plans should reflect your final product.

7. Put all equipment back in the drawer when finished and hang on to your DV tape for editing in iMovie in TC 406. You will return your tape to Dr. Stuve when the semester is over.

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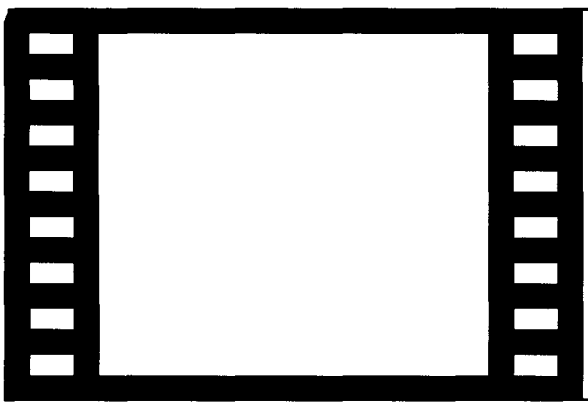
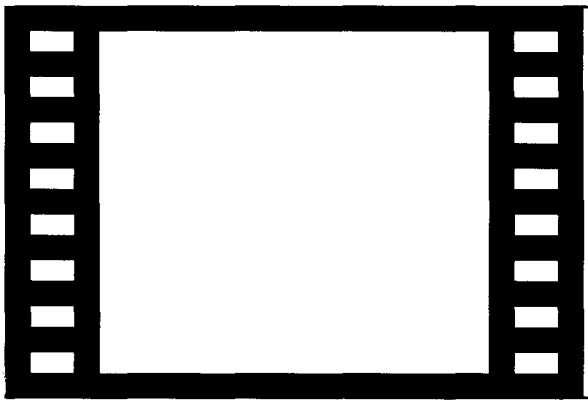
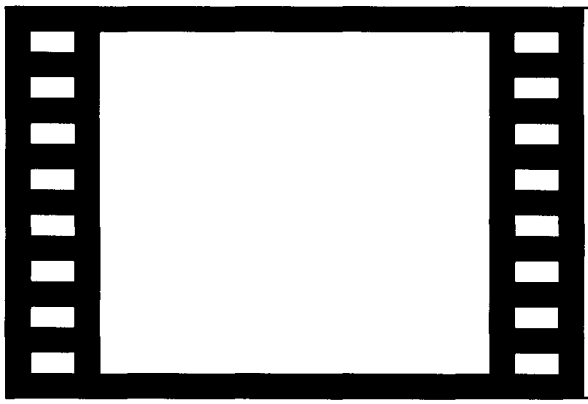
Film Title: **Name:**



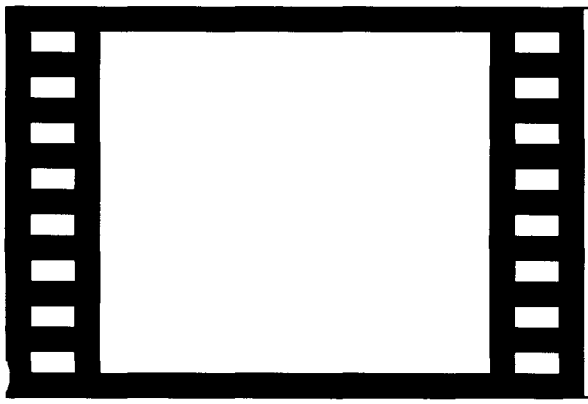
Scene ___



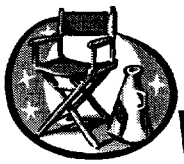
Scene ___



Scene ___



Scene ___



What is a Storyboard?

A storyboard is a document that overviews the entire project. It is a plan that describes what will be seen and heard in the final case study. Your final project should closely resemble the completed storyboard.

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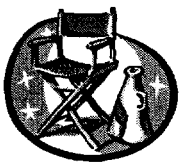
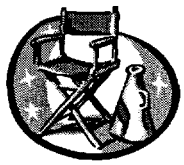
How Do You Use a Storyboard?

The storyboard communicates what will be seen and heard in the completed case study. Each box represents one scene. In the film box (left box), draw a picture of how the scene will appear visually. In the text box (right box), number the scene and write a description of what will occur during that scene and what sound (music, actor's voice, voice over, etc.) will be needed.

Back



Shot Plan



Name of Project:

Group Members:

Shot Number: --Select Shot Number--

Location of Shot:

Date of Shot:

Scene Description (discuss visual and sound)

Will an extended view of the computer screen be in the shot?

○ Yes ○ No

If so, you need to address screen flicker. If you can schedule the use of an iBook (with and LCD screen that does not flicker).

Equipment Needed: Please check all appropriate boxes.

- ☐ Digital Video Camera
- ☐ Tripod
- ☐ Wireless Microphone Set
- ☐ Camera Mounted Microphone
- ☐ Still Camera
- ☐ Mini DV Tape
- ☐ iBook
- ☐ Other:

Individuals Involved In Scene:

Camera Operator:

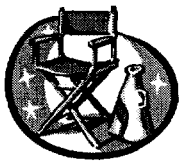
Lighting/Sound Person:

Actors:

- ☐ Student(s)
- ☐ Teacher(s)
- ☐ Ourself(ves)
- ☐ Other

Email addresses of group members:

Submit Reset



Human Subjects

Reflective Analysis of Portfolio Artifact

- **INTASC Principle :**

INTASC #6 Communicates

- **Brief Description of Evidence:**

Paperwork associated with the human subjects component of the project.

- **Analysis of What we learned:**

This part of the project allowed us to organize the administrative task of making sure that all students had the proper permission to participate in the project. We had to ensure that EDTEC students assumed considerable responsibility for the compliance of the Burris student participants. We realized the legal aspects of completing a project of this caliber.

Parent Permission for Videotaping, creating a CD-ROM, and displaying on the Internet.

Project Information:

This year the EDTEC 320 students from Ball State are working with the teachers at Burris at a "Reciprocal Apprenticeship" The Reciprocal Apprenticeship model is designed for EDTEC 320 students to learn about teaching from Burris teachers, while at the same time the teachers learn about technology from the students. The teachers will present a instructional challenge to the EDTEC students who will help complete a lesson plan that has technology integrated into it. The teachers will then conduct this lesson with the EDTEC students to see how the Burris students react and use the software that they have chosen. The EDTEC students will record the lesson on videotape with which they will make web-based (and potentially CD-ROM-based) case studies. The case studies will be a creative way for the students to learn using software and for the EDTEC staff and students to observe how the children use technology.

We do not anticipate any negative effects on your child as a result of their activities related to the project. While participation in the project may have positive effects on your child's use of computers, the construction of the case studies will not affect the assessment of your child's academic performance. Participation in this project is voluntary and you may decide to exclude your child from the project activities at anytime. Your child's teacher will participate in a review of all video footage in order to ensure that the final selection of video/photo data represent only those students whose parents have given prior permission. Only first names will be used in this project and pseudonyms will be used in all reports to insure the confidentiality of student identities.

In the space at the bottom of this letter, please indicate whether you do or do not want your child's likeness to appear on the web or on CD-ROM. If you have any questions about this research project, please feel free to contact us either by mail or by telephone. We look forward to working with your child's teacher and classroom

Sincerely,

Matthew Stuve, Ph.D., Assistant Professor, Dept. of Educational Studies (285-5485)
Steve Ransom, Doctoral Student, Elementary Education (285-4109)
Eve Ensley, Senior Honors Student, Elementary Education
Alyssa Wehrkamp, Senior Honors Student, Elementary Education

I hereby ( ) grant permission or ( ) do NOT grant permission

for my child, _____
(name of child)

to participate in the project described above. If I have granted permission, the final product may be produced as (check one)

( ) CD_ROM ( ) Internet ( ) Both

I understand that participation is voluntary and I may choose to exclude my child at any time.

_____ _____

parent/guardian signature Date

Case Studies

Reflective Analysis of Portfolio Artifact

- **INTASC Principle :**

  INTASC #8 Evaluates

- **Brief Description of Evidence:**

  Case studies created by EDTEC 320 that we evaluated.

- **Analysis of What we learned**:

  These case studies are a culmination of the work by the students throughout the semester. We were able to look at the cases that we helped to create and provide informal individualized feedback and evaluation. Students also evaluated and reflected on the case studies of their peers. We learned that informal evaluation and peer feedback is sometimes the best form of assessment. Students learn not only from their work, but from each other as well.

iBook Explorations

Project Overview

by Mrs. Murray, Kelli Kenning, Michelle Brown, Steve Ransom

Grade level: Fourth Grade

Content Area: General

Keywords: iBooks, laptops, ubiquitous computing

Overview: Working with Mrs. Murray and Mr. Ransom, identify a subtheme within the class as they student use iBooks. Mrs. Murray and Mr. Ransom will be working on a larger study in the use of the iBooks by the class, but there is room for a group of apprentices to explore a discrete issue with which to build a mini-case study.

msn Hotmail® eeensley@hotmail.com Inbox | Previous Page

From : mjstuve@bsu.edu
To : mstuve@mac.com, eeensley@bsu.edu, kkenning@hotmail.com, michelleb10@hotmail.com
Subject : Shot Plan, iBook
Date : Wed, 03 Apr 2002 15:38:29 -0500

Group Members - Kelli Kenning
Michelle Brown

Shot Number - 1

Date of Shot - March 27 2002

Location - Mrs. Murrays Classroom

Computer Screen - Yes

Scene Description - We Video taped a group of three students in the back of the classroom using laptops to complete a class project. The camera was stationed on a tripod with a wireless microphone in the center of the three desks the students were at. We were hoping to pick up student conversation regarding the laptops.

Equipment - DV Camcorder, Tripod, Wireless Microphone, Mini DV Tape, iBook
---
Other Equipment -

Camera Operator - Kelli

Lighting and Sound Person - Kelli

Actors - Students
---
mit - Submit

"Kelli Kenning
Michelle Brown","1","March 27 2002","Mrs. Murrays Classroom","Yes","We Video taped a group of three students in the back of the classroom using laptops to complete a class project. The camera was stationed on a tripod with a wireless microphone in the center of the three desks the students were at. We were hoping to pick up student conversation regarding the laptops. ","DV Camcorder, Tripod, Wireless Microphone, Mini DV Tape, iBook","","Kelli","Kelli","Students","Submit"

msn Hotmail® eeensley@hotmail.com Inbox | Previous Page

From : Eve Ensley <eeensley@hotmail.com>
To : mjstuve@bsu.edu, mstuve@mac.com, eeensley@bsu.edu, kkenning@hotmail.com, michelleb10@hotmail.com
Subject : Re: Shot Plan, iBook
Date : Thu, 04 Apr 2002 14:13:01 -0500

For future shot plans, please make sure you submit it prior to taping the actual scene. (For this first scene, I know that your group did not have enough time to submit a form before you began taping.) Good luck with the rest of your project. Let me know if you need any help with the videography aspect of your project.

Eve

msn Hotmail® eeensley@hotmail.com Inbox | Previous Page

From : mjstuve@bsu.edu
To : mstuve@mac.com, eeensley@bsu.edu, michelleb10@hotmail.com, kkenning@hotmail.com
Subject : Shot Plan, ibook project
Date : Thu, 04 Apr 2002 11:55:21 -0500

Group Members - Michelle Brown
Kelli Kenning

Shot Number - 2

Date of Shot - April 8, 2002

Location - Mrs. Murray's classroom

Computer Screen - No

Scene Description - Interview students about the use of laptops in the classroom. We will be using the microphone to record students answers.

Equipment - DV Camcorder, Tripod, Wireless Microphone, Mini DV Tape
---
Other Equipment -

Camera Operator - Michelle

Lighting and Sound Person - Kelli

Actors - Students, Ourselves
---
mit - Submit

"Michelle Brown
Kelli Kenning","2","April 8, 2002","Mrs. Murray's
classroom","No","Interview students about the use of laptops in the
classroom. We will be using the microphone to record students
answers.","DV Camcorder, Tripod, Wireless Microphone, Mini DV
Tape","","Michelle","Kelli","Students, Ourselves","Submit"